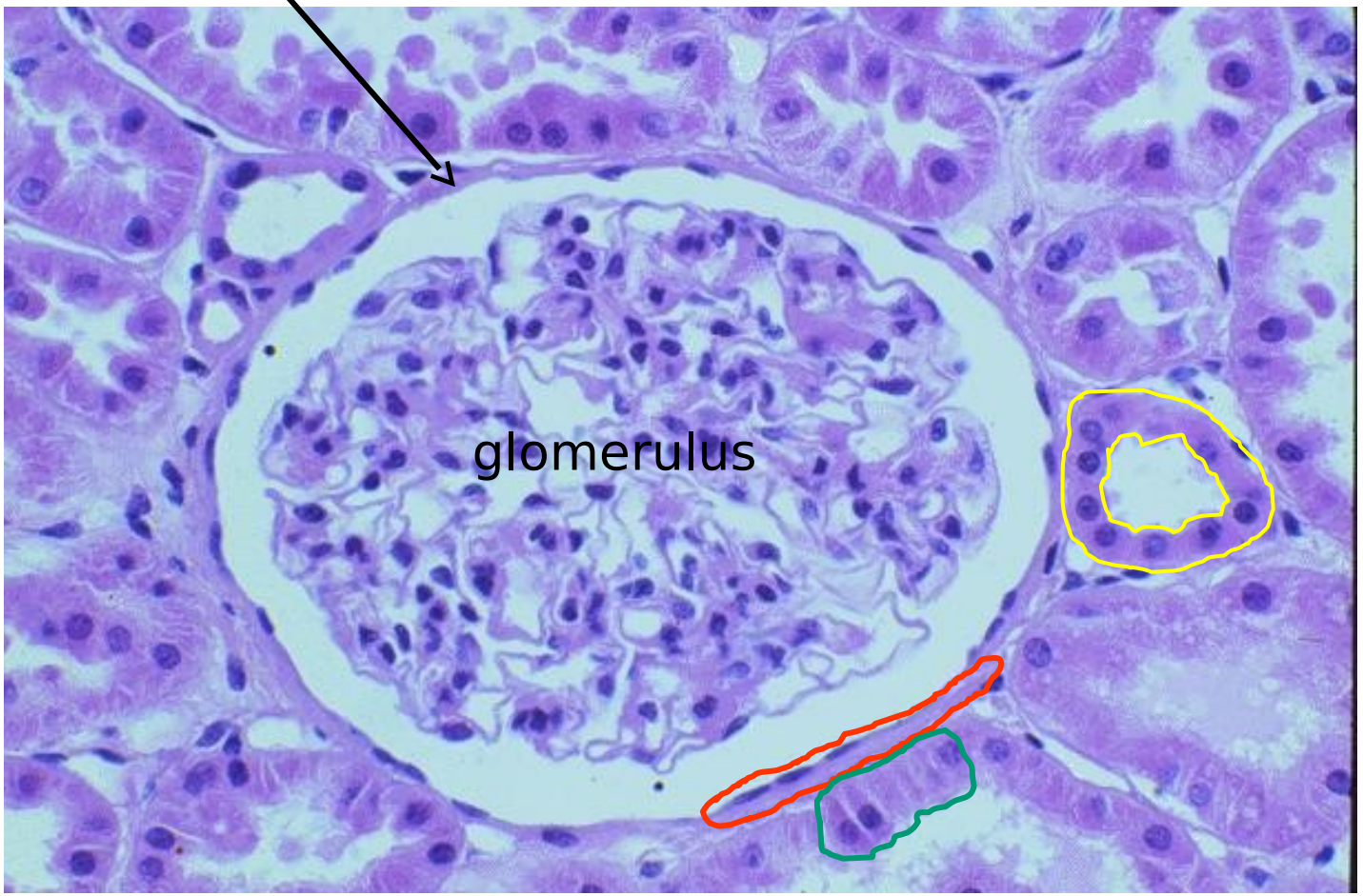
Simple Squamous Epithelium

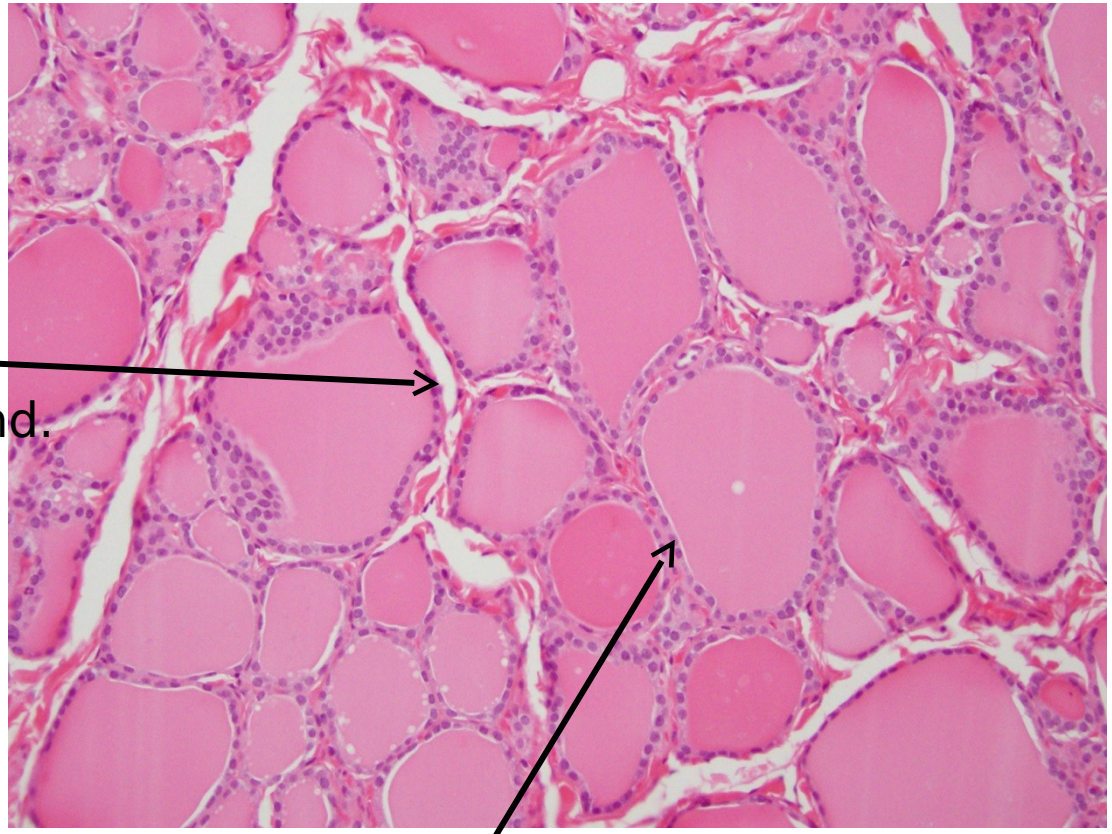
This is simple squamous epithelial tissue.
The structure is the glomerular capsule, found in the kidney.

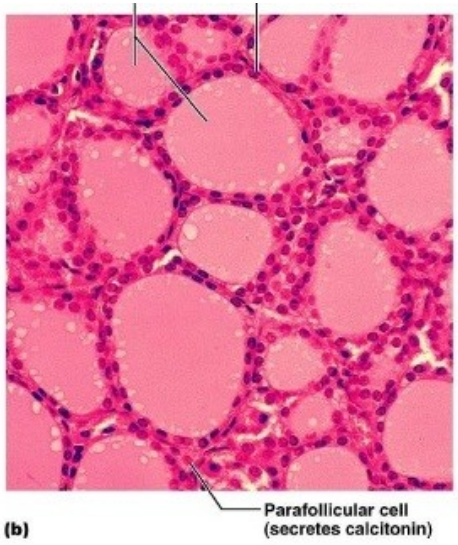


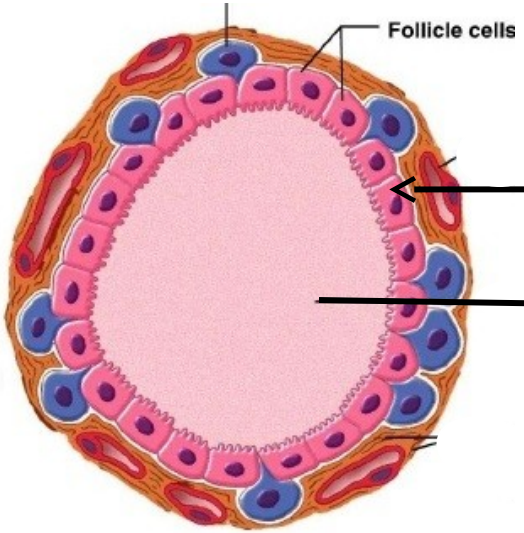
There are examples of many different epithelial tissues in the kidney.
Red = simple squamous; Green = simple columnar; Yellow = simple cuboidal

Simple Cuboidal Epithelium

In our lab slides, simple cuboidal epithelial tissue is found in the thecal follicles of the thyroid gland.



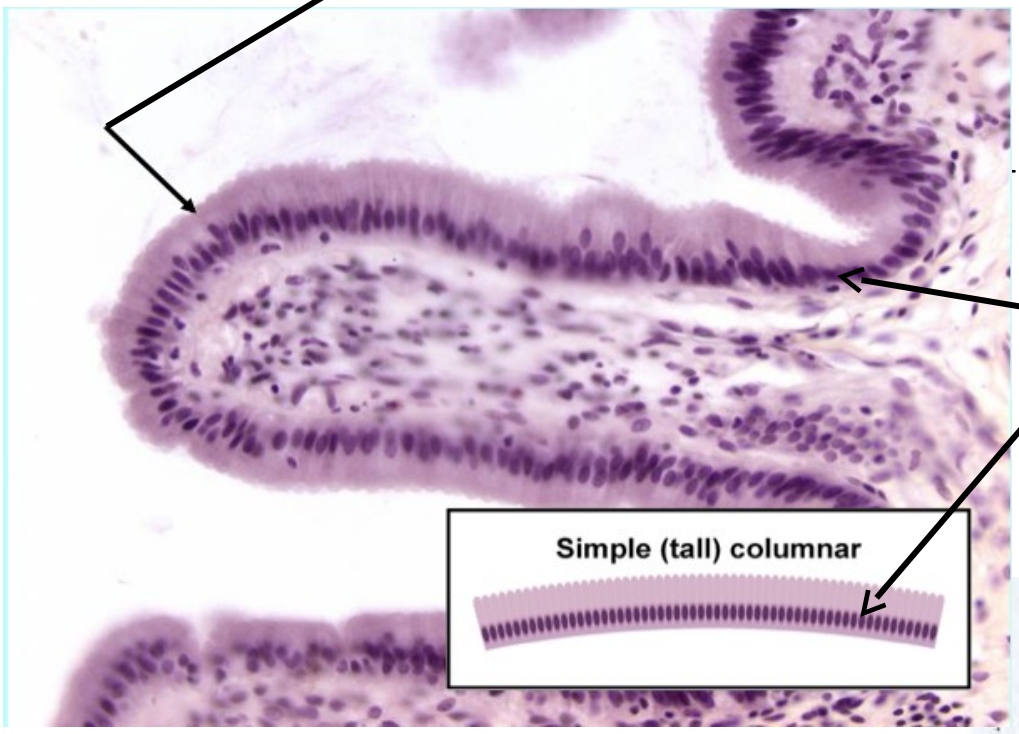




Simple cuboidal epithelial

Hormones are stored in the colloid

Simple Columnar Epithelium



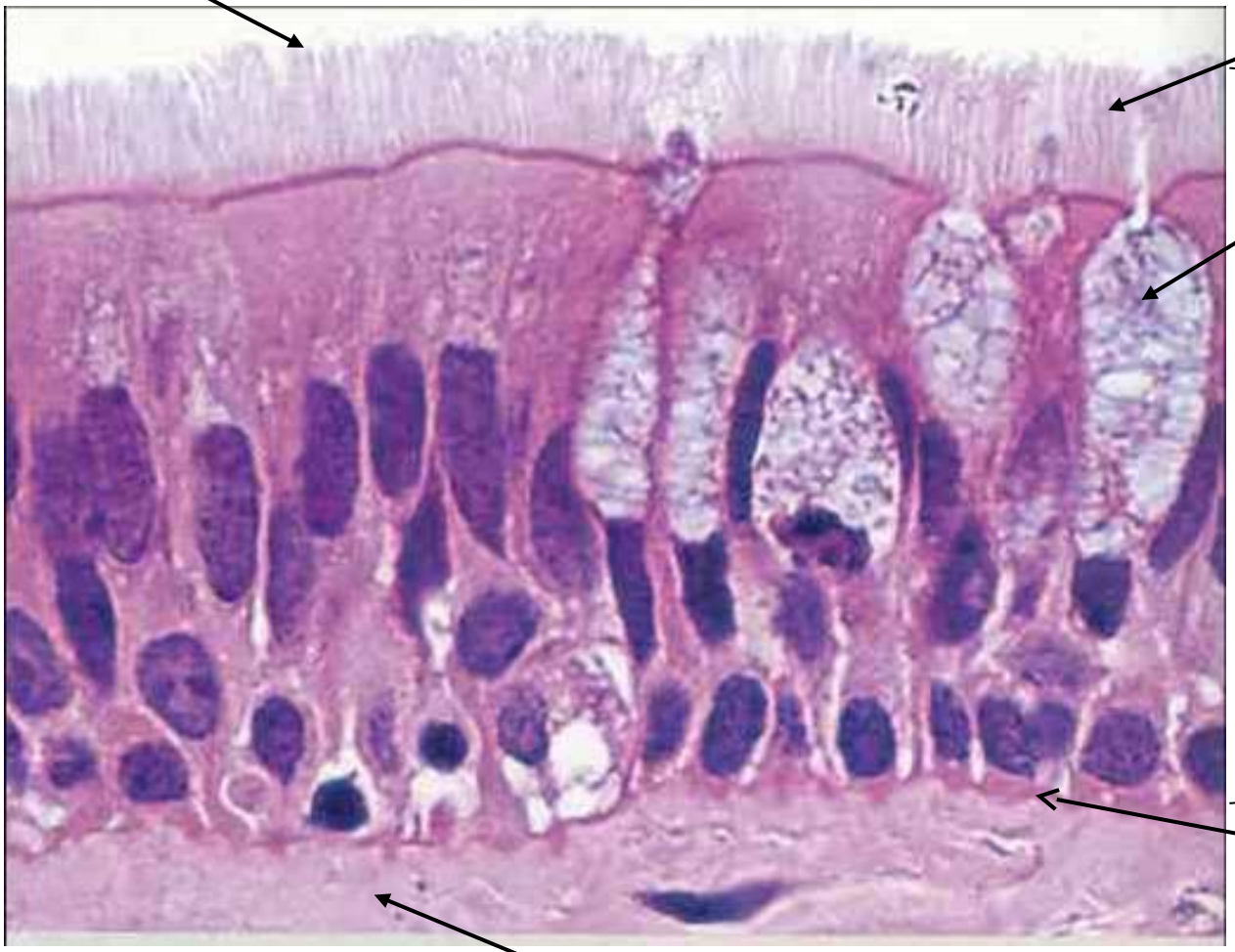
In our lab slides, simple columnar epithelial tissue is found in the Lining of the small intestine.

Notice how the nuclei of the columnar cells are lined up in the single layer.

These are both simple columnar epithelial tissue.

Pseudostratified Ciliated Columnar Epithelium

This is the exposed or apical end of the epithelial tissues!



Cilia

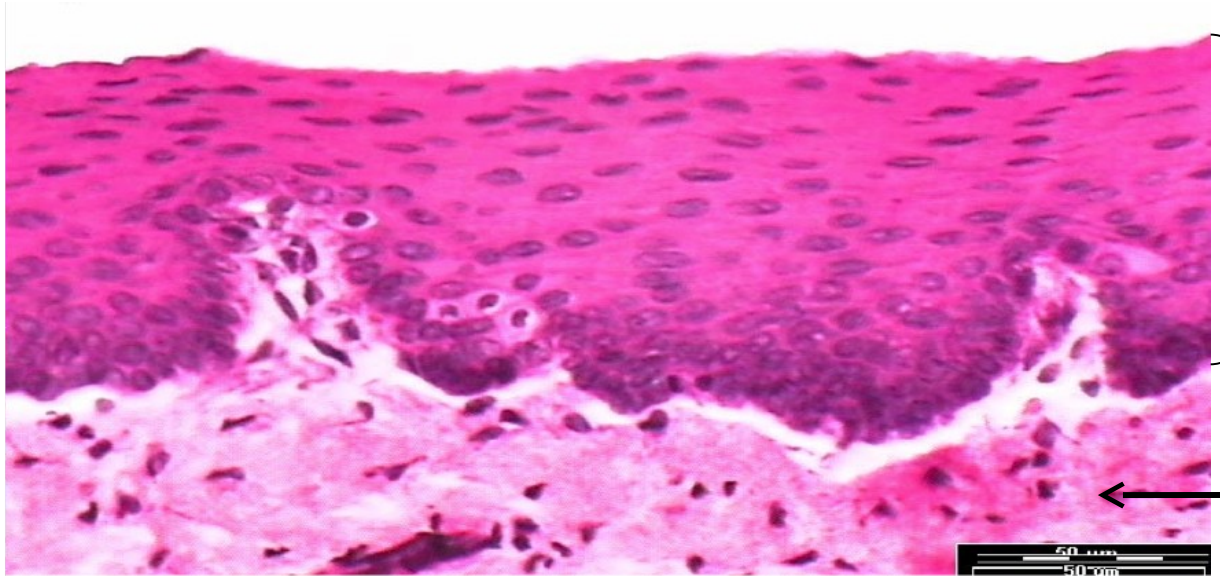
Goblet cell

PSCC

Notice how there appears to be several layers of nuclei in this tissue, but all cells are attached to the basement membrane.

All epithelial tissues sits on connective tissue!

Stratified Squamous Epithelium



This is the stratified squamous epithelium.
It is non-keratinized, or
wet epithelium.
Notice the flat apical cells.

This is connective tissue supporting epithelium.

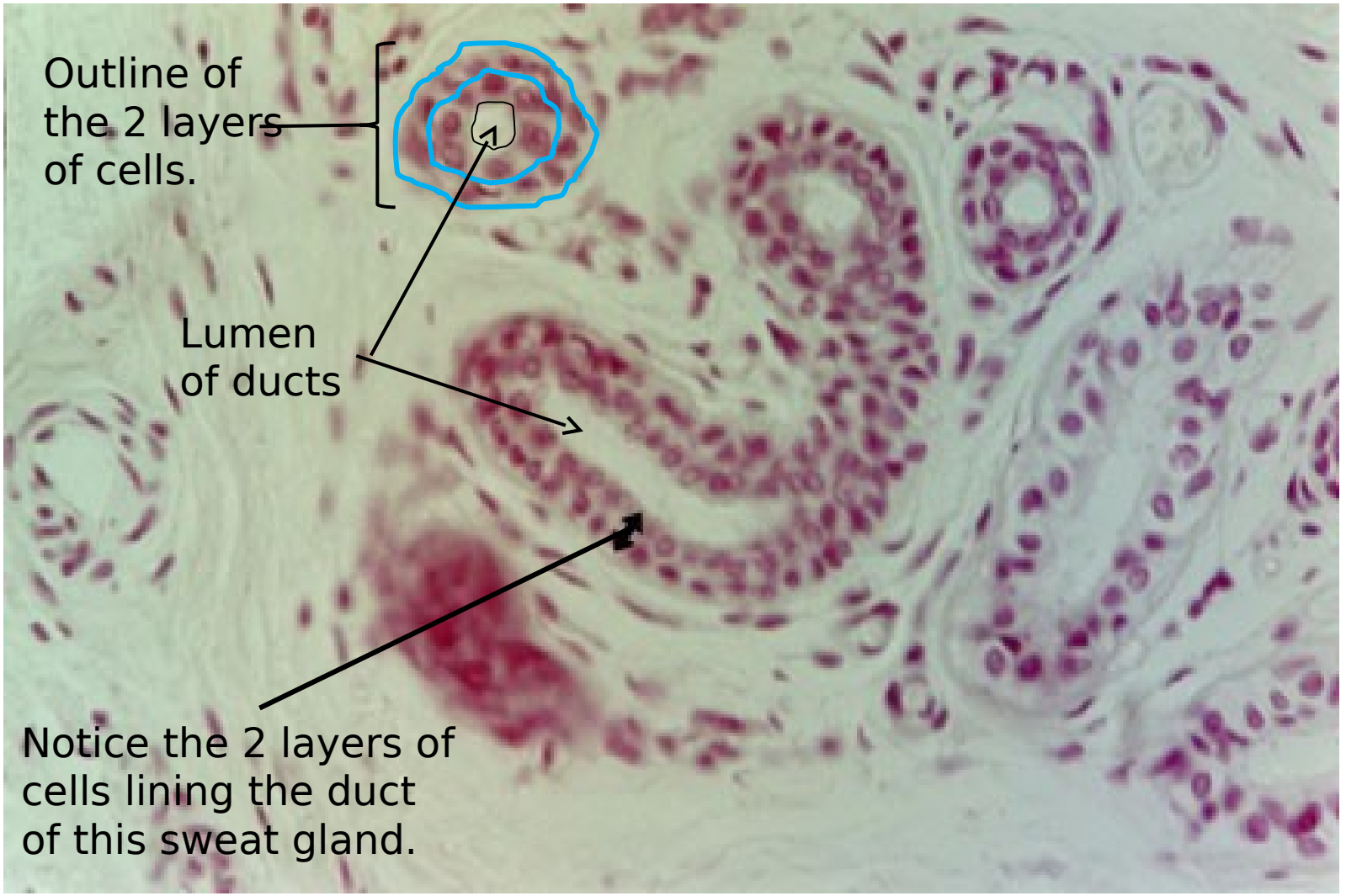
Stratified Squamous Epithelium

Keratinized, or dry

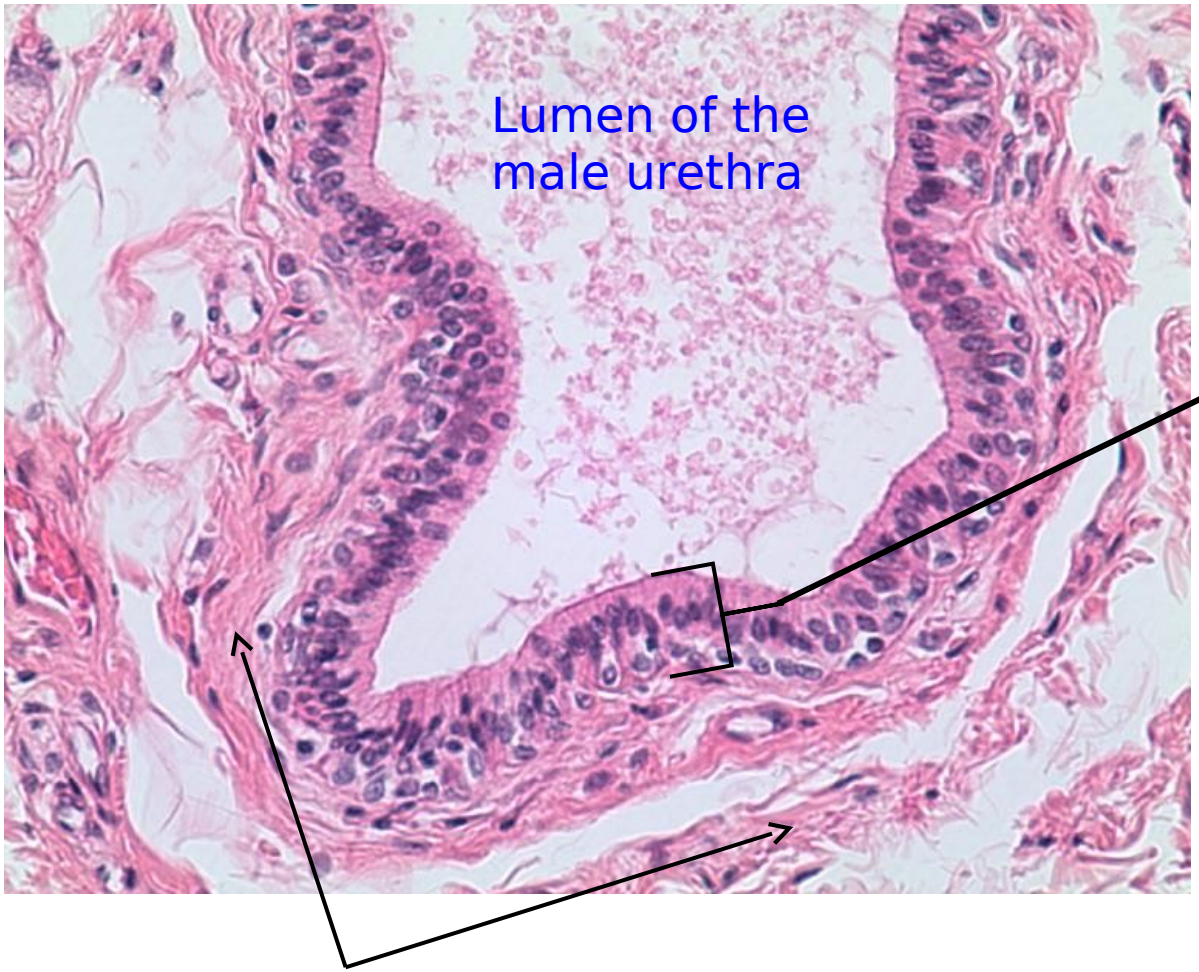
Notice how the cells at the apical end are so flat and dry they are flaking off = keratinized!

This is dense irregular connective tissue.

Stratified Cuboidal Epithelium



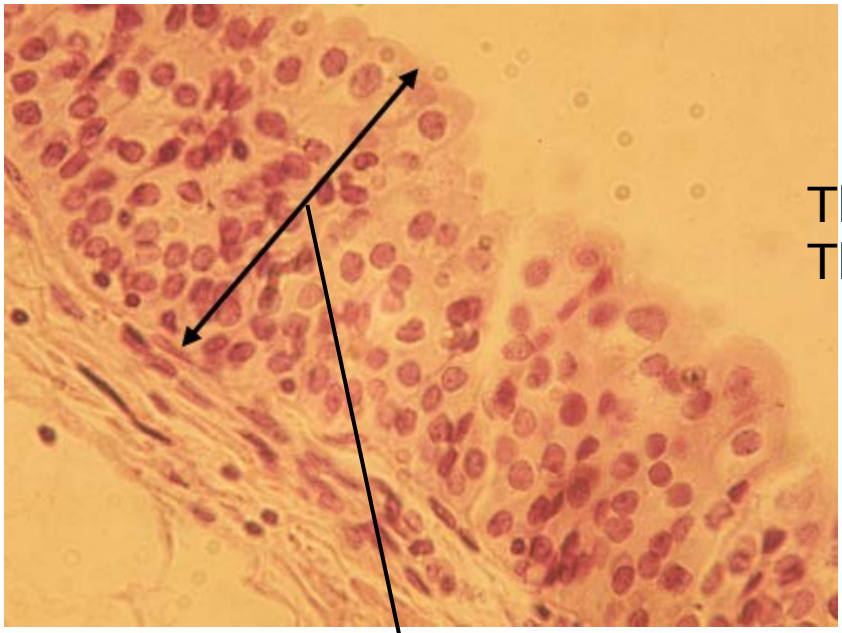
Stratified Columnar Epithelium



There are 2 layers of cells and the apical, or exposed cells are columnar in shape.

Connective tissue is supporting all of the epithelial tissue.

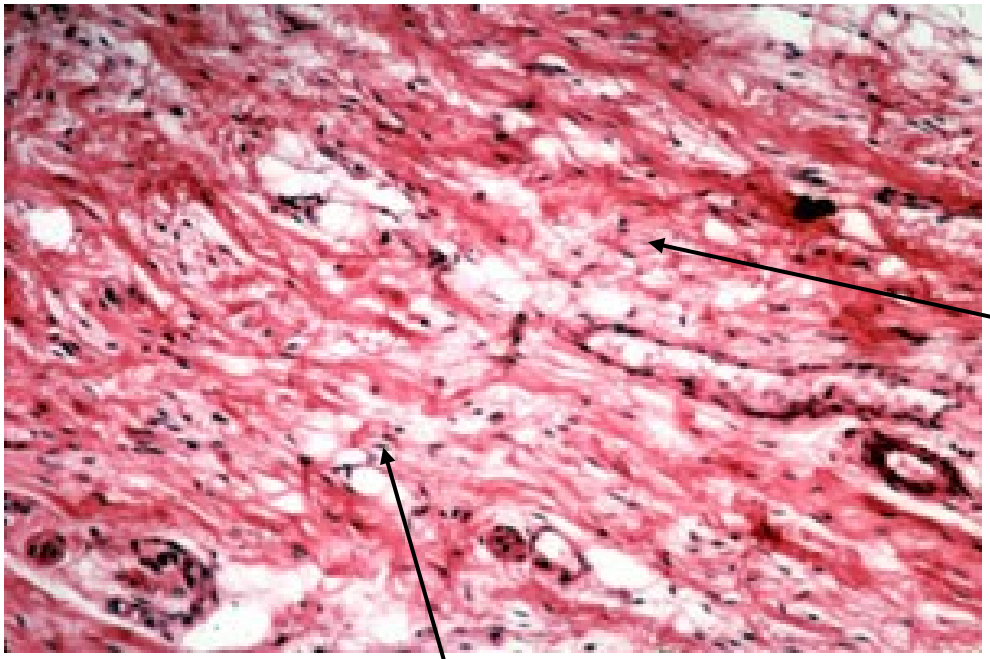
Transitional Epithelium



This tissue lines most of the urinary system. The examples shown are from the ureter.

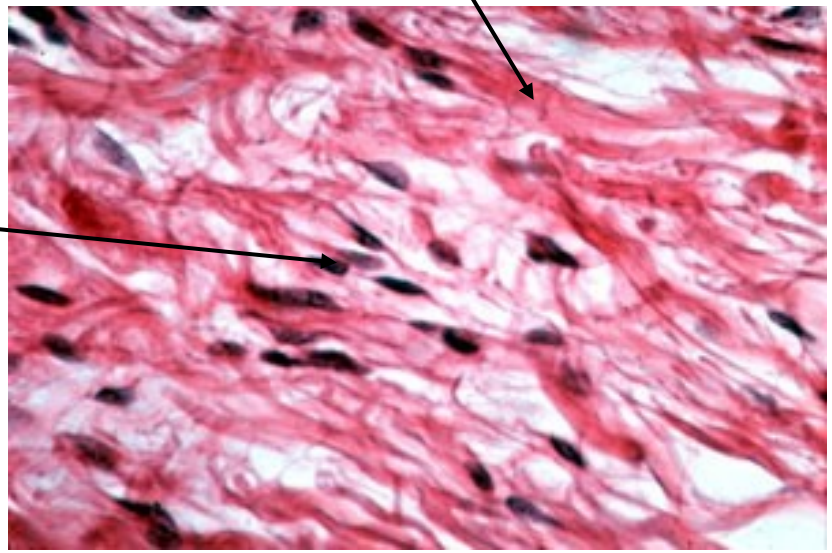
There are many layers of cells in this epithelial tissue and the shape of the apical cells are not really flat or defined and also change, thus are transitional.

Areolar Connective Tissue



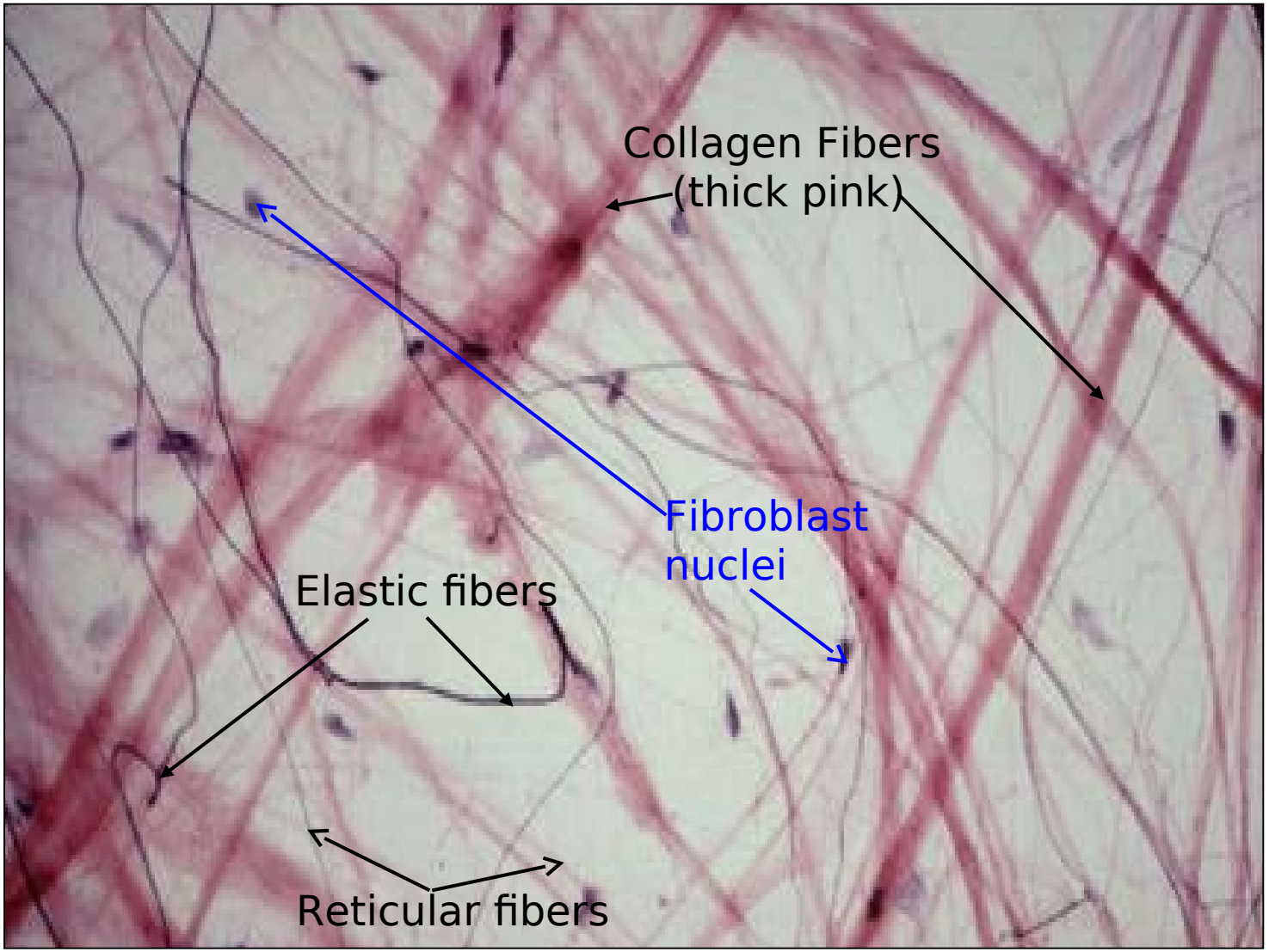
Collagen
Fibers (thick pink)

Fibroblast
nuclei

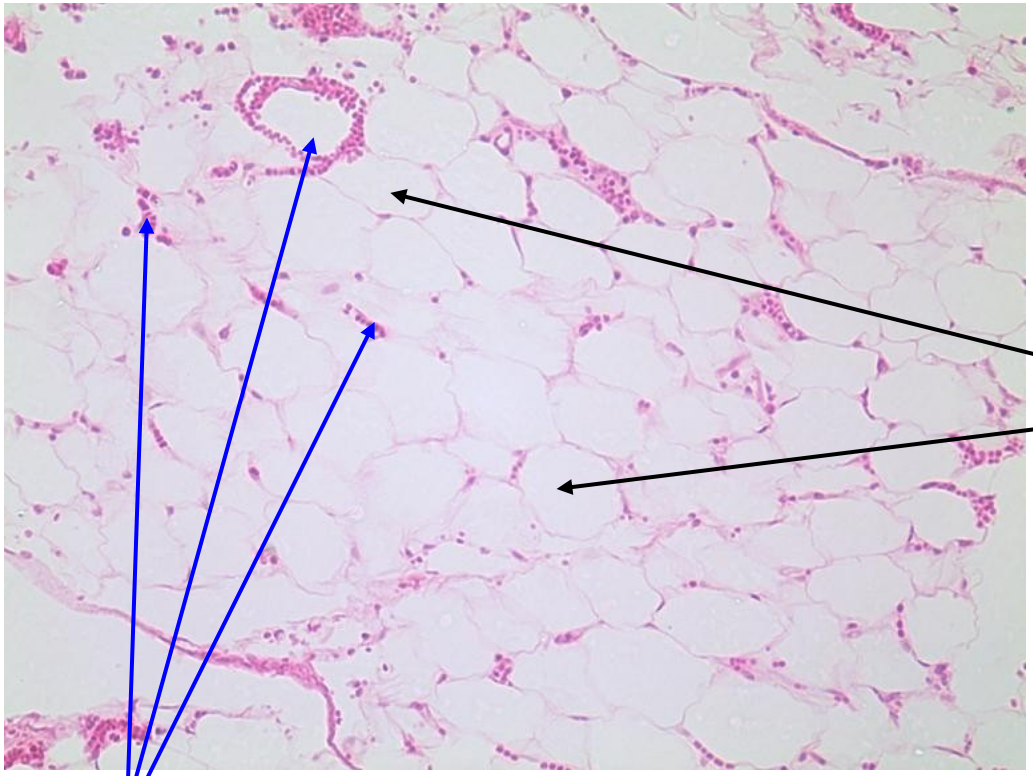


No visible elastic or reticular fibers in this picture from the web!

Areolar Connective Tissue



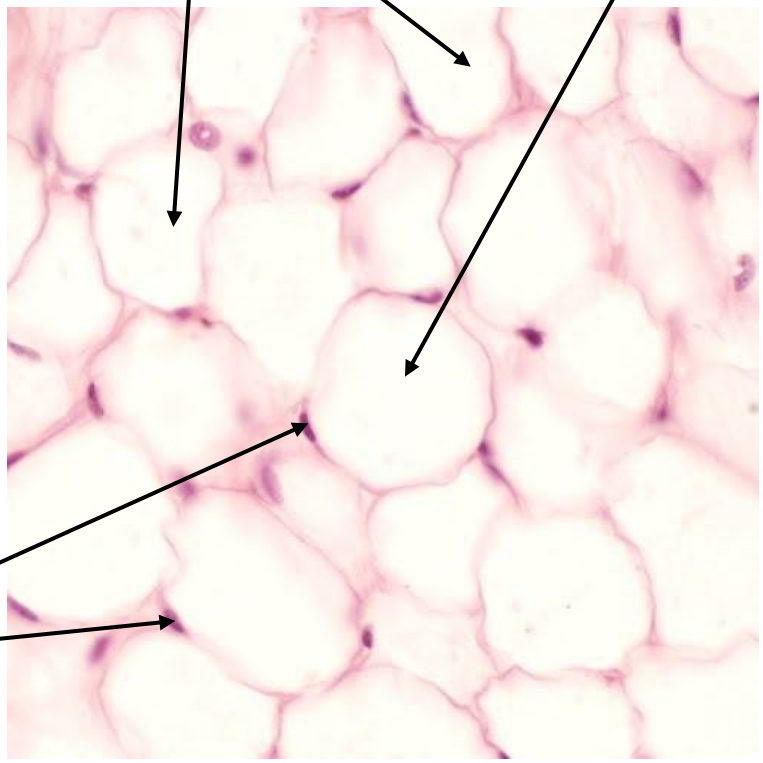
Adipose Connective Tissue



Blood Vessels

Adipocytes

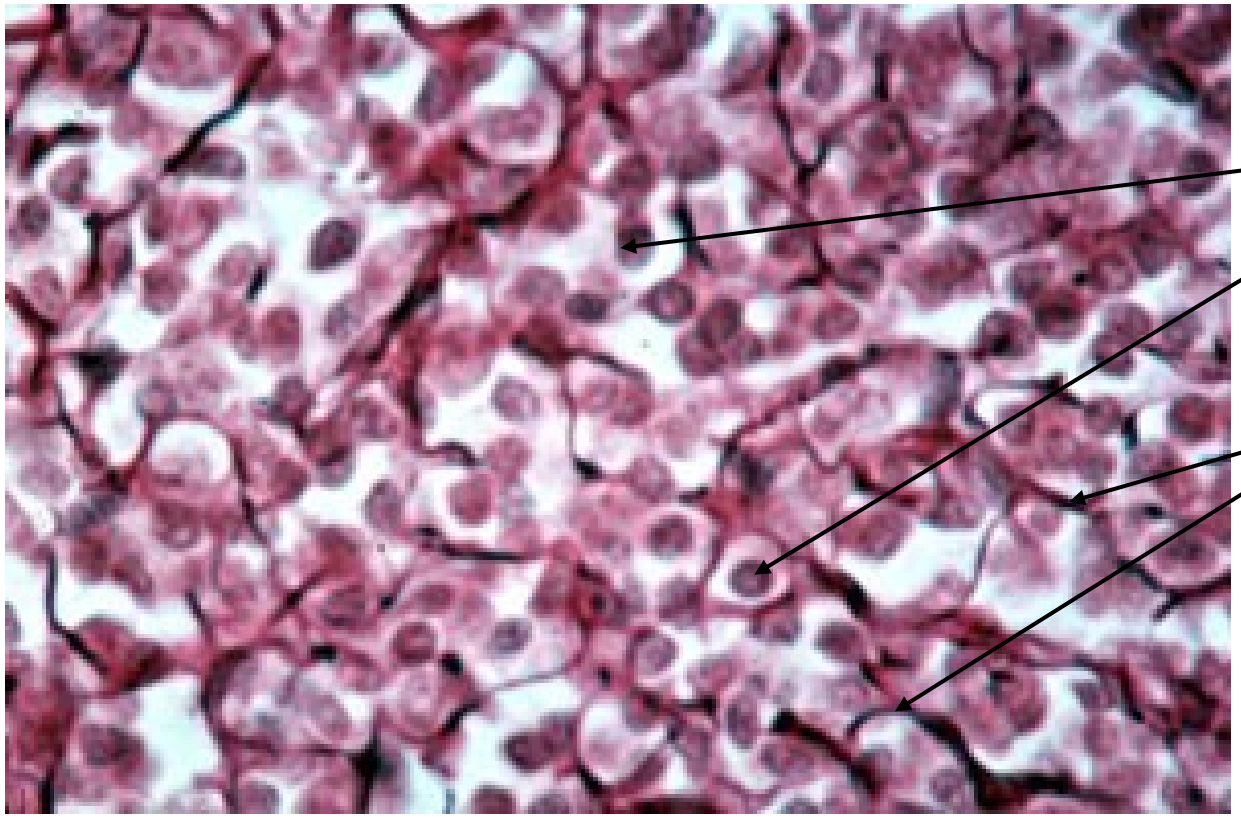
Fat vacuole (inside cell)

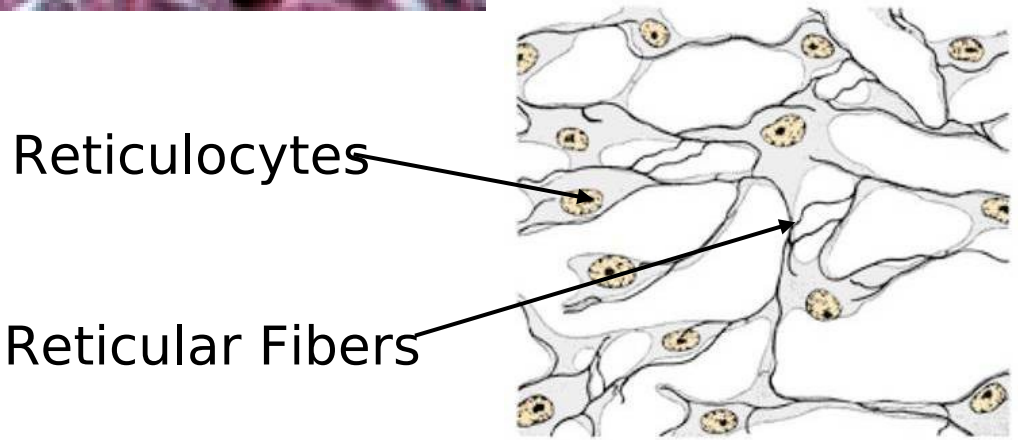


Adipose tissue is highly vascularized, you can see many blood vessels throughout this tissue.

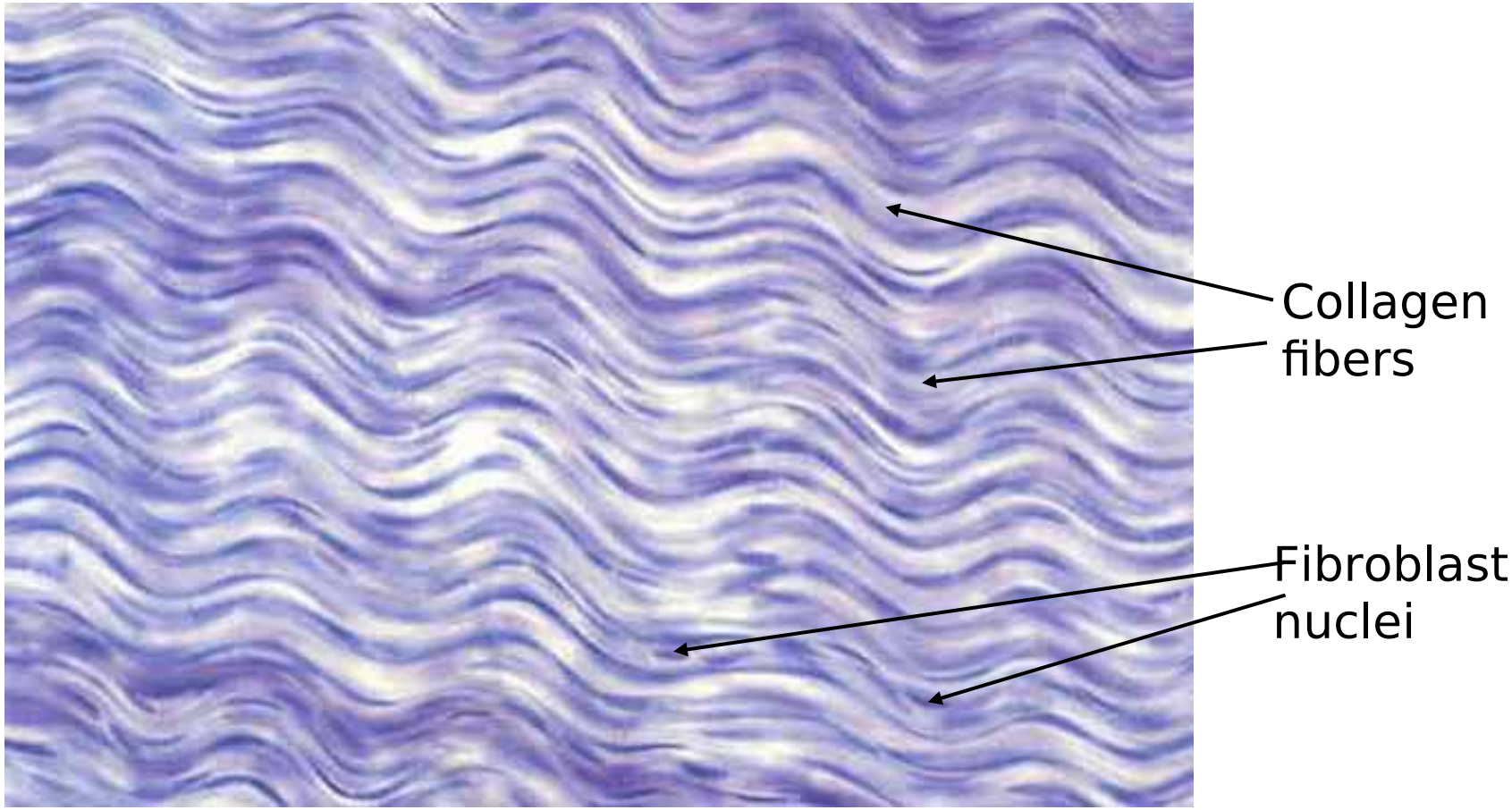
Adipocyte Nuclei

Reticular Connective Tissue

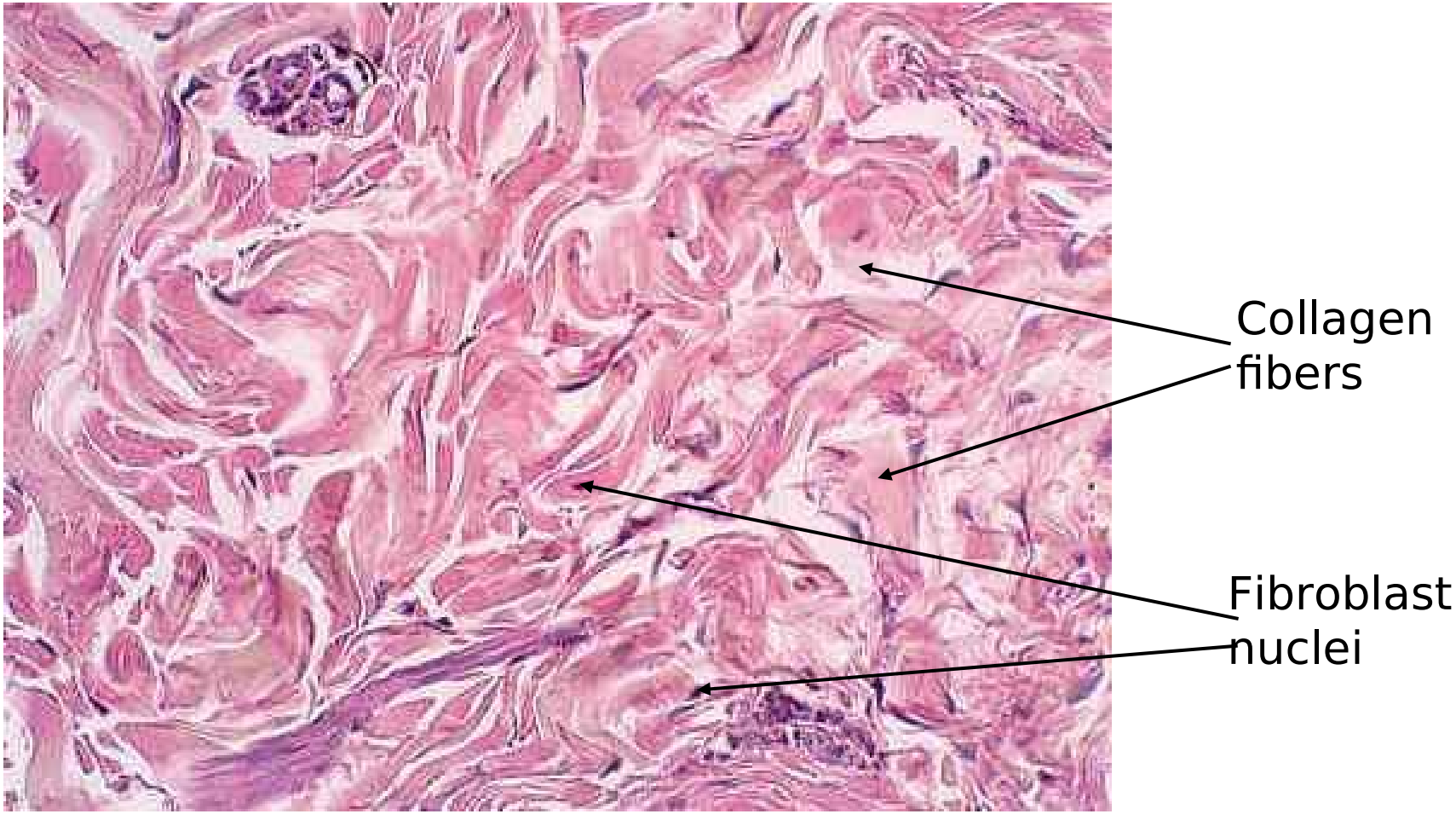




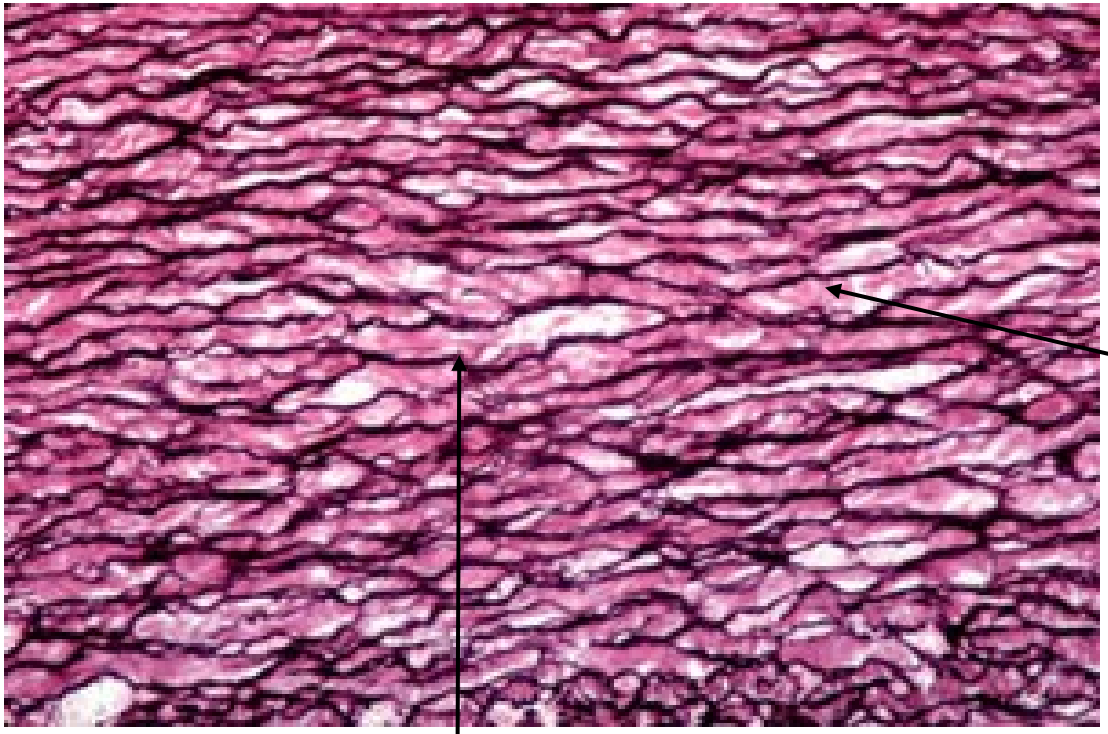
Dense Regular Connective Tissue



Dense Irregular Connective Tissue

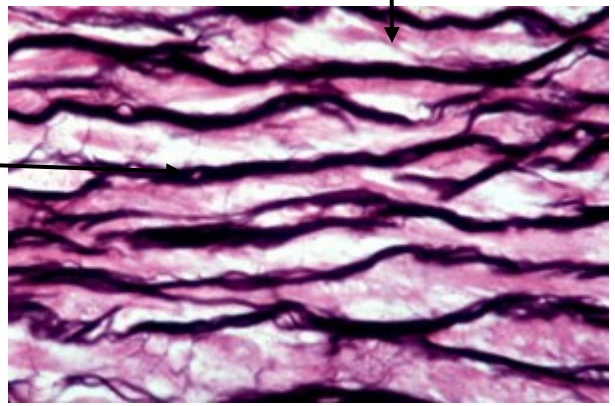


Elastic Connective Tissue

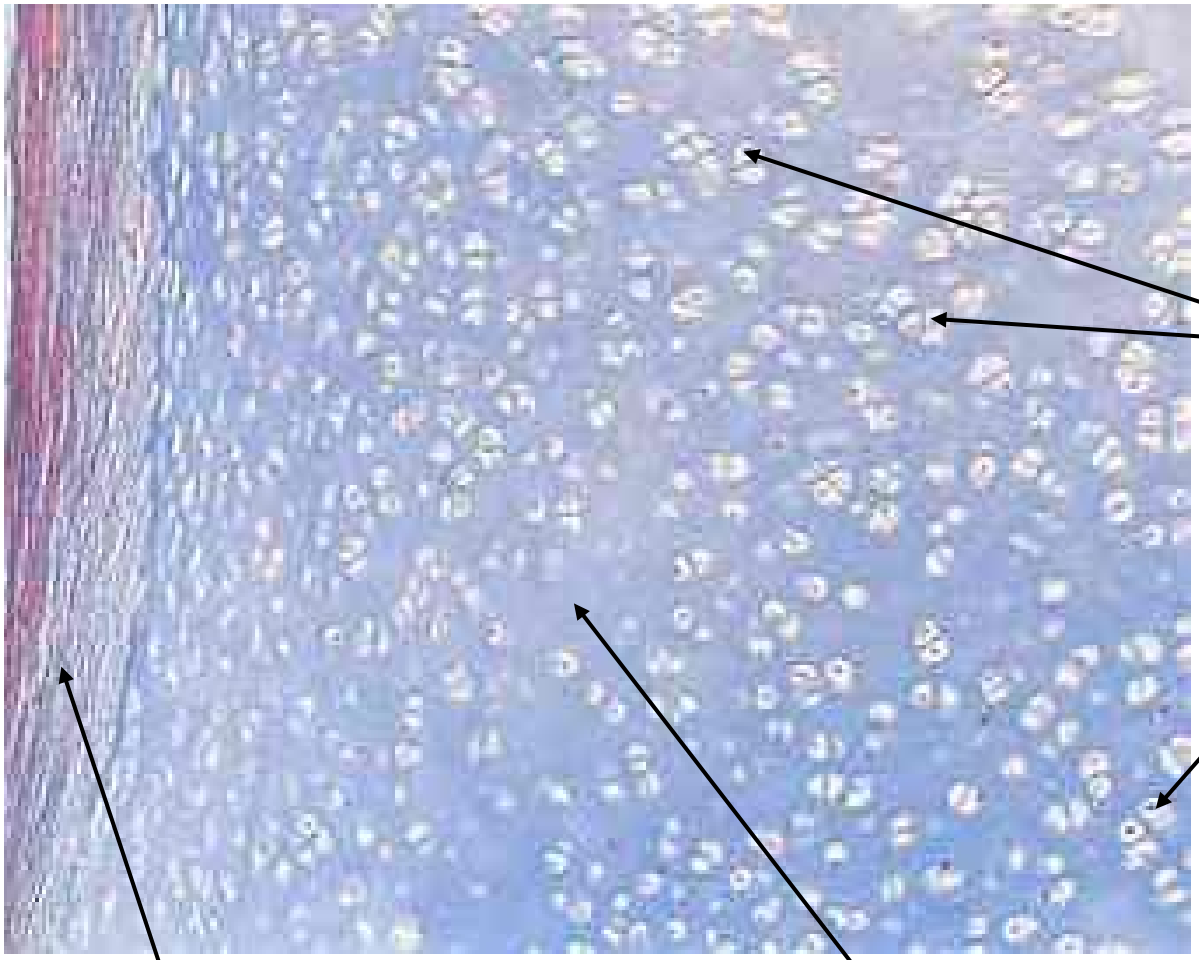


Collagen
Fibers (pink)

Elastic
Fibers (dark)



Hyaline Cartilage



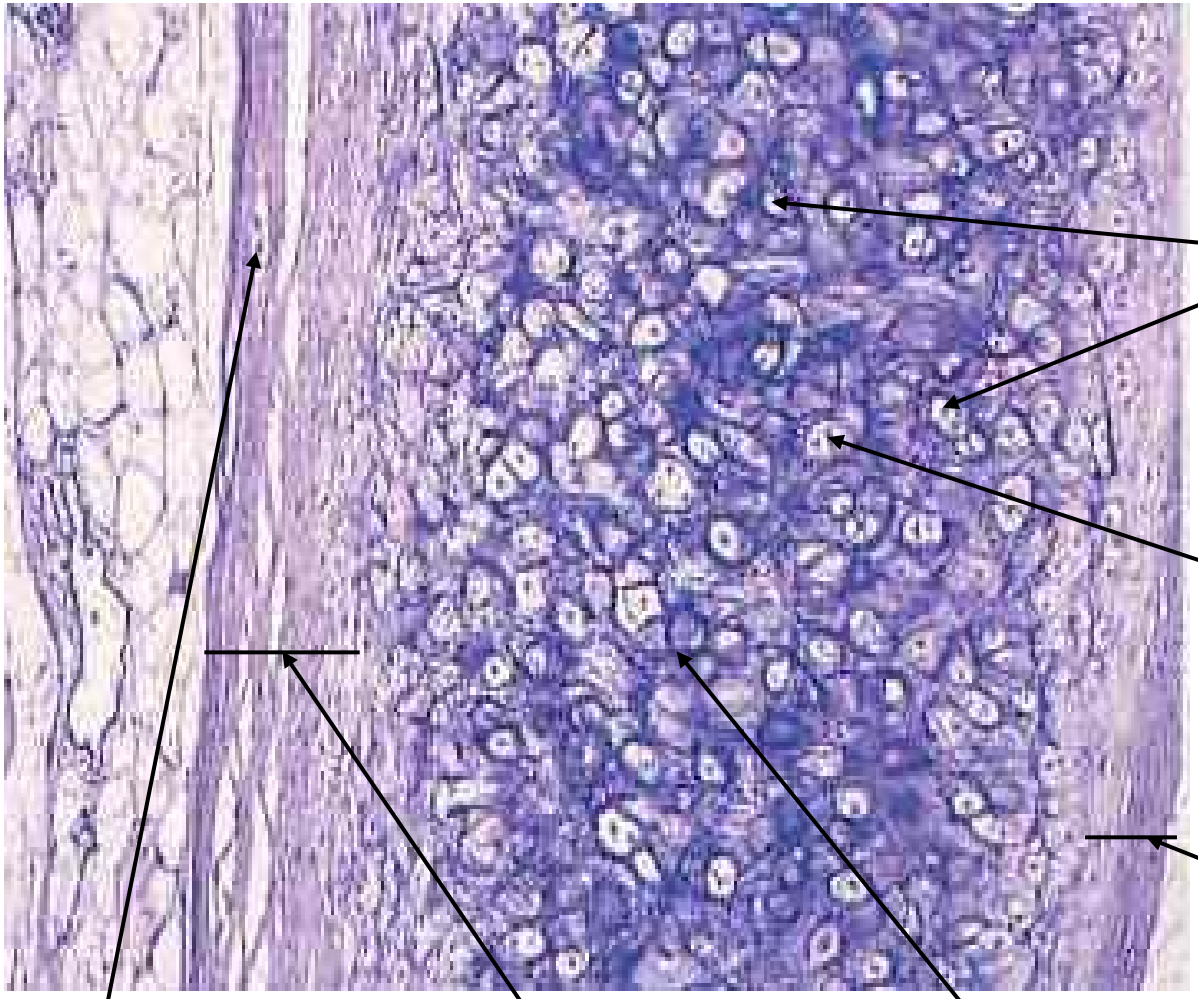
Chondrocytes

Chondrocyte inside lacuna

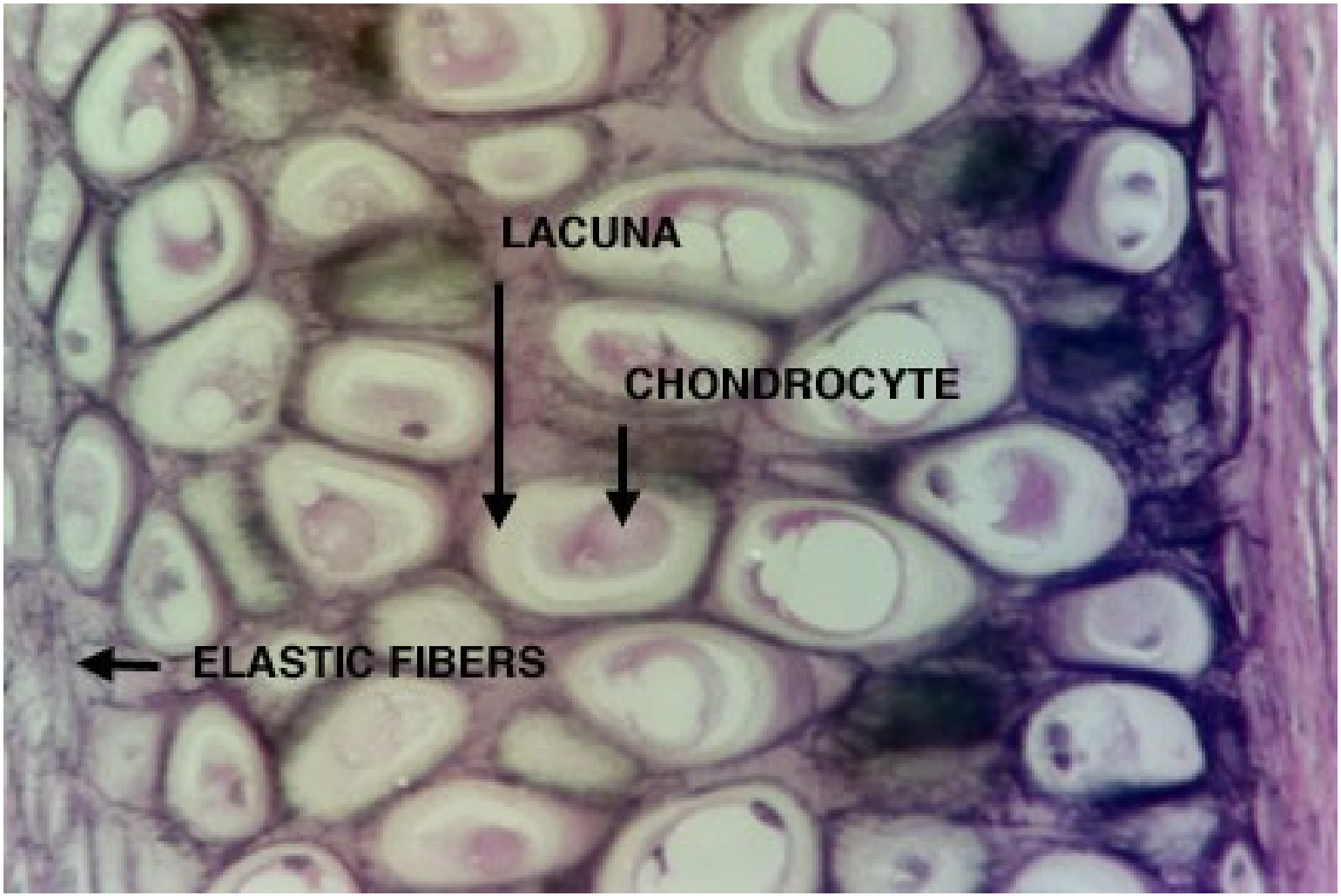
Perichondrium (no chondrobasts visible!)

Clear, ‘glassy’ matrix

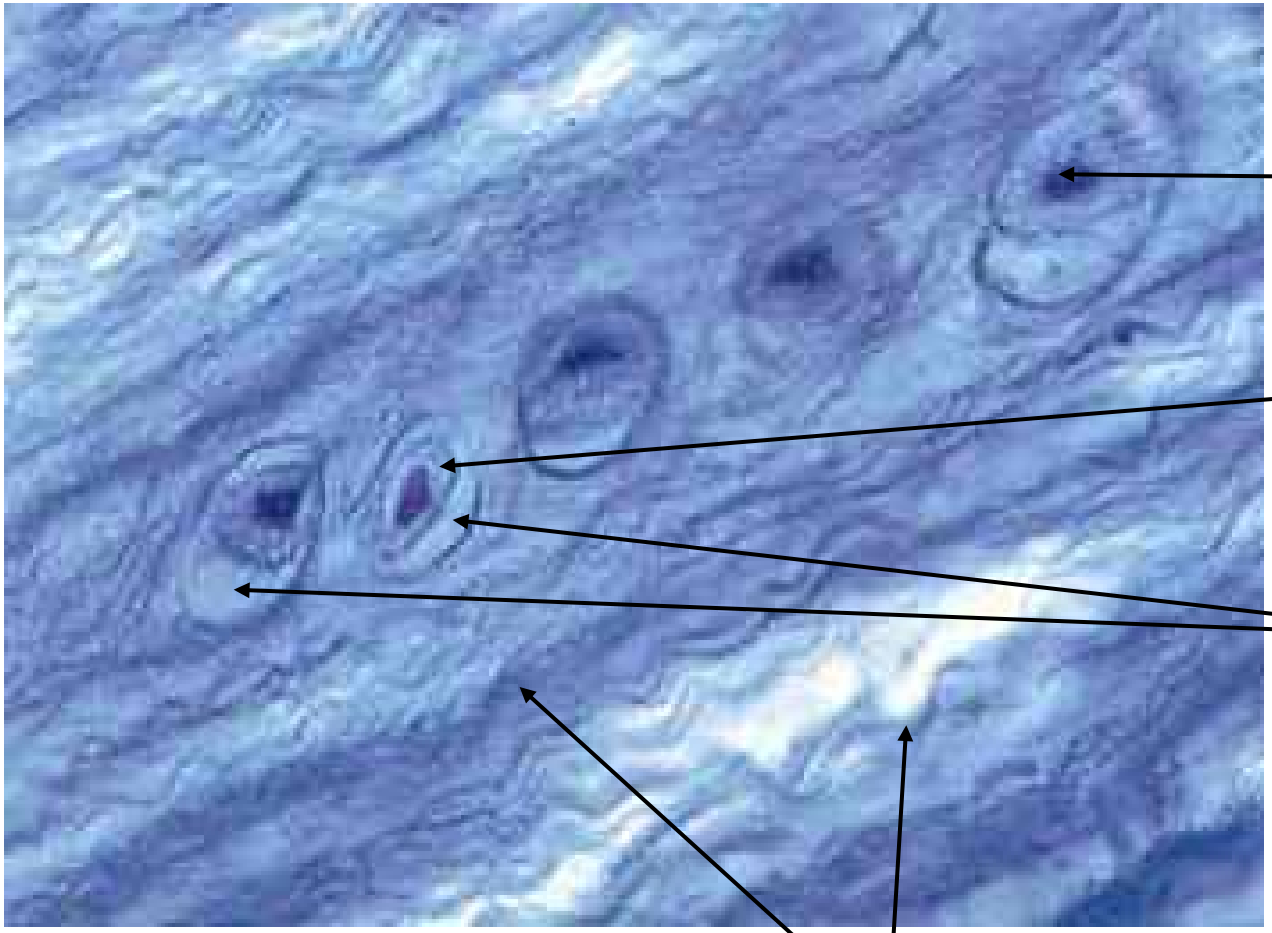
Elastic Cartilage



Elastic Cartilage



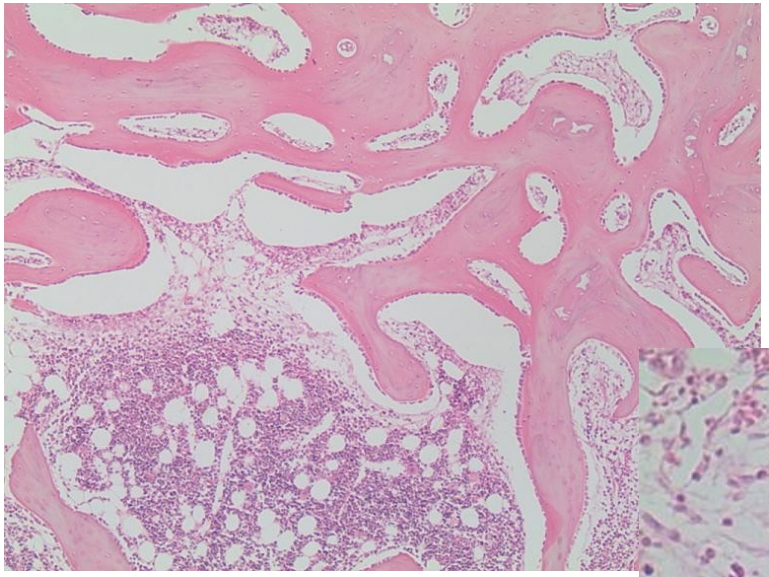
Fibrocartilage



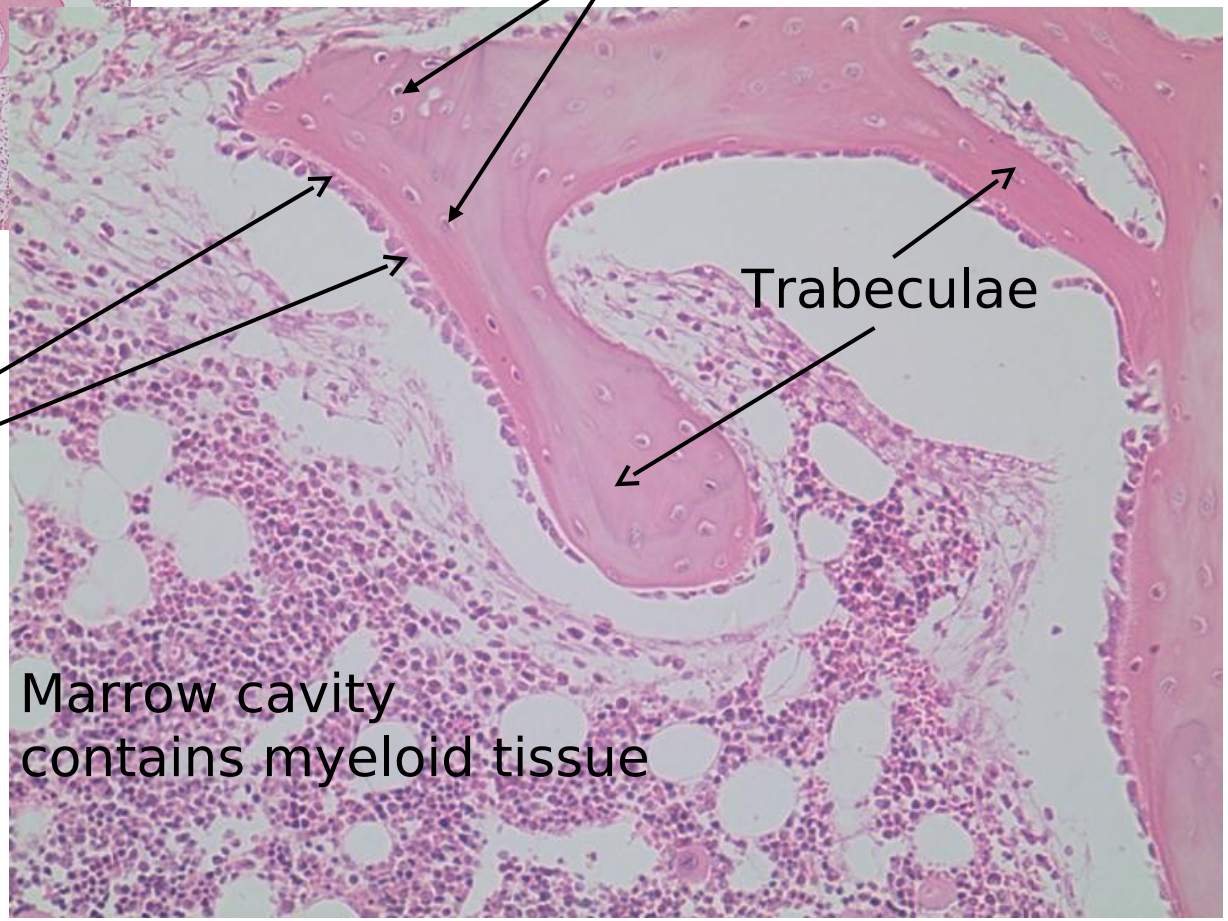
Note: There is no perichondrium in this type of cartilage tissue.

Spongy Bone

Spongy bone is found on the inner aspect of bone



Zoon in



Compact Bone

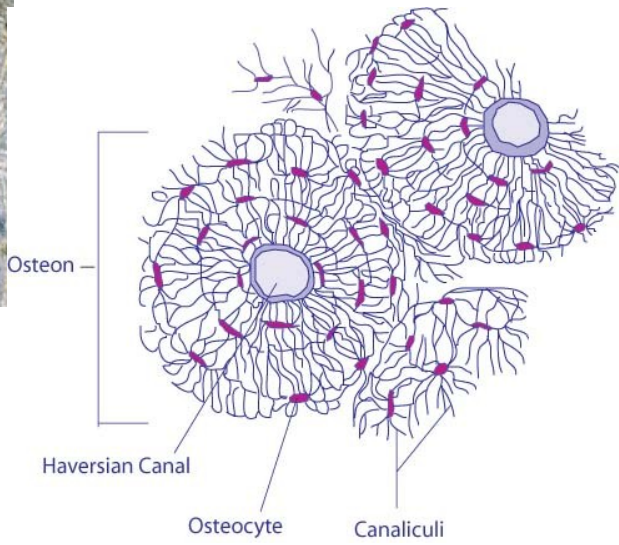
Compact bone is found on the outer aspect of bone

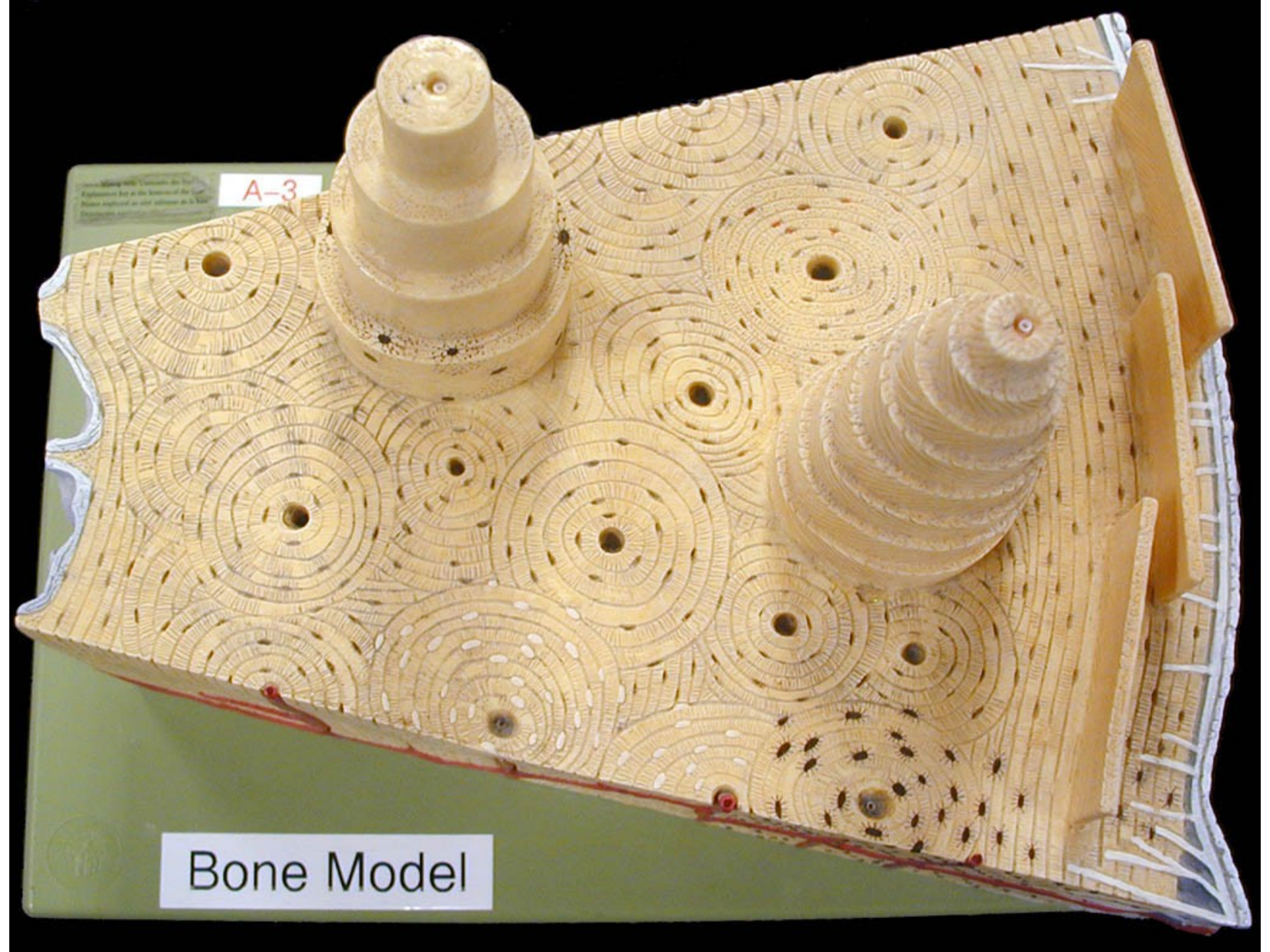
Central canal

Osteocytes inside lacunae

Osteon Unit

Canaliculi




A–3
Bone Model

Epidermis of Skin

Sebaceous Glands

Sudoriferous (Sweat) Gland

dense irreg c.t. !

"bundle of coiled tubes"

blood vessel!

Adipose tissue!